



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,370	07/08/2003	Brooke Smith	10011859-3	9825

7590 02/23/2005  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

NGUYEN, LAM S

ART UNIT PAPER NUMBER

2853

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Ak

<b>Office Action Summary</b>	<b>Application No.</b> 10/615,370	<b>Applicant(s)</b> SMITH ET AL.	
	<b>Examiner</b> LAM S. NGUYEN	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 11/08/2004
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18, 20 and 33-41 is/are allowed.
- 6) ☒ Claim(s) 21-27, 29, 30, 32 and 42 is/are rejected.
- 7) ☒ Claim(s) 28 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Terminal Disclaimer***

The terminal disclaimer filed on 11/08/2004 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6655797 patent has been reviewed and is accepted. The terminal disclaimer has been recorded. As a result, the nonstatutory double patenting rejections have been withdrawn.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 29 recites the limitation "the fixer and overcoat". There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 21-27, 29, 32, 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 6102537) in view of Kato et al. (US 6439708).

#### **Referring to claims 21, 29, 32:**

Kato et al. discloses a program/ a program storage element/ an article for a processor to generate swath data for printer including full-height ink, and a half-height protective coating

Art Unit: 2853

printheads (*FIG. 11B: Corresponding heads for ejecting PRINT INK, P LIQUID 1, and P LIQUID 2*), the full-height printhead for ejecting black or colored ink (*FIG. 26: Black, cyan, yellow, magenta printheads*), the half-height protective coating printhead containing fluids that, when in contact, form a protective coating (*FIG. 11B: P LIQUID 2 and column 40, lines 23-26: The printing property improving liquid for making the coloring agent of the inks insoluble or coagulated*), the half-height printhead having a plurality of separate ink ejection elements, the program stored in computer memory (*FIG. 26, element ROM*) instructing the processor to generate swath data only for a subset number of ink ejection elements in each half-height printhead so that ink is deposited and the fixer and overcoat are deposited on the ink (*FIG. 15: Only a subset of printing elements corresponding to each image region is used for printing a scan*) (*Note: Because the claim preamble is a processor programmed to process the generation of swath data sent to the printheads, the printheads are considered as end units that are separated from the processor; as a result, the height, either full-height or half-height of the heads does not contribute any functional or structural characteristic to the steps in the process or structure of the processor, respectively. Thus, the "height of the printheads" is considered but not given patentability weight*).

Kato et al. does not disclose wherein the protective coating printhead comprises first/fixing and second/overcoating printheads, wherein the first/fixer printhead deposits drops of a fixer onto the colored ink, and the overcoat printhead deposits drops of an overcoat onto the colored ink.

Kato et al. (US 6439708) discloses a printhead having at least one ink

Art Unit: 2853

printhead for depositing drops of a colored ink on a medium (*FIG. 5: four heads 1 contain nozzles 22, 23, 24, 25*), a first/fixer printhead for depositing drops of a fixer onto the deposited drops of the colored ink (*FIG. 5: head 1b contains nozzles 21 for ejecting the second liquid; column 3, line 65-67: "depositing a second liquid containing a reactant, which forms coagulate upon contact with the ink composition, onto the recording medium, separately before or after the deposition of the ink composition or the first liquid"*), and a second/overcoat printhead for depositing drops of an overcoat onto the deposited drops of the colored ink (*FIG. 5: head 1d contain nozzles 26 for ejecting the first liquid; column 19, line 5-10 and Abstract: "after printing of an ink composition, the application of the first liquid to form a coating"*) (**Referring to claim 23**).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to replace the protective coating printhead as disclosed by Kato et al. (US 6102537) by two separated printheads for ejecting liquids having different characteristics for fixing and overcoating the ink as disclosed by Kato et al. (US 6439708). The motivation for doing so would have been to produce, on recording media, good images possessing good lightfastness, waterfastness, rubbing resistance/scratch resistance, and gloss as taught by Kato et al. (US 6439708) (*Abstract*).

**Kato et al. also disclose the following claimed invention:**

**Referring to claim 21:** advancing the print medium by a distance half-height of the full-height ink printhead (*FIG. 15*).

**Referring to claim 22:** wherein the processor is a printer controller (*FIG. 26: CONTROL UNIT*).

**Referring to claim 24:** wherein the processor also generates the swath data for the ink printhead (*FIG. 26: Black, cyan, yellow, magenta printheads*).

**Referring to claim 25:** wherein the processor always generates null swath data for a group of ink ejections elements in each printhead (*FIG. 15*).

**Referring to claim 27:** wherein the groups contain the same number of ink ejection elements (*FIG. 15*).

**Referring to claims 26, 30:** wherein the program causes the processor to generate swath data for N contiguous groups of each printhead, where integer  $N > 1$ ; and wherein null swath data is always generated for at least one group of each printhead (*Fig. 15*).

***Allowable Subject Matter***

3. Claims 1-18, 20, 33-41 are allowed and claims 28, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Referring to claims 1, 15, 33, and 37:** The primary reasons for the indication of the allowability of the claims is the inclusions therein, in combination as currently claimed, of the limitation that wherein the fixer and overcoat printheads are half-height relative to the at least one inkjet printhead is neither disclosed nor taught by the cited prior art of record, alone or in combination.

**Referring to claims 28, 31:** The primary reasons for the indication of the allowability of the claim is the inclusions therein, in combination as currently claimed, of the limitation that wherein null swath data is always generated for the first and second groups of printhead ejection

Art Unit: 2853

elements of the first and second protective coating printheads is neither disclosed nor taught by the cited prior art of record, alone or in combination.

Claims 2-14, 16-18, 20, 34-36, and 38-41 are allowed because they depend directly/indirectly on claim 1, 15, 33, or 37.

### ***Response to Arguments***

Applicant's arguments with respect to claims 21, 29, 31, and 42 have been considered but are moot in view of the new ground(s) of rejection. In response to the applicants statement that the claims had been amended as the method of using apparatus claims in order for the height of the printheads being given patentability weight, the examiner cites that since the claim preamble is a processor programmed to process the generation of swath data sent to the printheads, the printheads are considered as end units that are separated from the processor; as a result, the height, either full-height or half-height of the heads does not contribute any functional or structural characteristic to the steps in the process or structure of the processor, respectively. Thus, the "height of the printheads" is considered but not given patentability weight.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2853

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S NGUYEN whose telephone number is (571)272-2151.

The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN  
February 18, 2005



HAI PHAM  
PRIMARY EXAMINER